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Editor - Captain L. B. Marshall, MC, USN (RET)

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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Closure of Cleft Lip and Palate

Cleft lips should be closed early, at 2 or 3 weeks of age, and palates at 2 to 6 months of age, depending on the complications confronting the particular case. There is no contraindication for this type of surgery from the standpoint of seasonal changes or weather conditions. The results are the same in winter or summer.

The baby's future health, happiness, and welfare are at stake when a decision is made in regard to the time for surgery. The earlier this type of work is done, within certain limitations, the better it will be for the child.

The surgeon who operates upon a cleft lip within the first few hours or days of life is to be condemned for doing so. This is an operation of choice, not an emergency; therefore it should be done when the baby is in the optimum physical condition to withstand such procedure and when examination of the heart, liver, lungs, spleen, kidney, and digestive tract shows beyond a doubt that the baby is going to be a healthy, viable one. This means that about 2 weeks of age is as early a time as can be chosen for the closure of a unilateral cleft lip.

As a rule, when a baby is born with a cleft lip and palate and one has the power to select the time for closure, the author's practice has been to close the lip at about 2 weeks of age and perform a closure of the palate at 3 to 6 months of age. If a baby with a cleft lip and palate is brought to one's attention at the age of 6 months or older (up to 2 years) then the author believes the palate should be closed first so the baby may have the optimum advantage of an early closure of the palate and resultant perfect speech.

Bilateral cleft lips and palates, as a rule, must be handled a little differently. Here the intermaxillary segment of bone and lip tissue usually projects from the tip of the nose. The best results are obtained by the author's method of closing the bilaterally cleft lip on both sides at once

which produces pressure on the intermaxillary segment of bone, causing it to move slowly between the two maxillary segments. This should be followed in 3 to 6 months by a closure of the palate.

The cleft palate, whether unilateral or bilateral, or whether it involves just the soft palate, or the soft palate and hard palate, or the soft palate, hard palate, and alveolar ridge, should be closed just as early as possible. By the term "early" the author means within a period of 3 to 6 months after birth. This time of closure depends entirely on the width of the cleft, the weight of the baby, the power of the baby to assimilate food, and all of the other factors involved that predetermine a successful result. The author never willfully waits longer than 6 months to close a cleft of the palate. The main reason for early closure of palates is the good result obtained at this time in healing, with subsequent normal health and speech. (Am. J. Surg., May 1954, L. W. Schultz, M. D., D. D. S.; The Presbyterian Hospital, Chicago, Ill.)

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Dissecting Aneurysm of the Aorta

This article calls attention to the frequency of dissecting aneurysms and outlines a diagnostic approach. It is based on the literature in addition to observations on 9 patients seen by the authors. Five cases were diagnosed during life.

Although cases are reported at every age, including infancy, dissecting aneurysm is usually encountered in patients past 40 years of age. Males predominate over females in a ratio of about 2:1 or 3:1. The condition is similar in these respects to coronary occlusion, with which it is most often confused. Some statistics favor Negroes over Caucasians, but no striking racial predisposition is apparent. Hypertension or demonstrable heart disease or both are present in almost all cases but this is not as invariable as some authors have implied. Diseases of the aorta such as hypoplasia and coarctation predispose to spontaneous dissection. Half the cases in young female patients have occurred during pregnancy or the puerperium. Patients with the congenital physical characteristics of Marfan's syndrome or arachnodactyly show a high incidence of dissecting aneurysms. Physical exertion was given much importance in the older literature, but many cases have been reported to occur during repose and sleep. Most authors at present believe that exertion has been over-emphasized.

Bedside examination yields vital information in the diagnosis of dissecting aneurysm. Laboratory procedures usually play a negative or minor role. X-ray studies are sometimes very helpful, but rarely suggest or prove the diagnosis. No single observation or laboratory test is conclusive. The dissection of the aorta itself is almost always manifested by abrupt and severe pain. The other signs and symptoms, which depend on changes in the

circulation through branches of the aorta, hemorrhage and pressure on adjacent structures, may be many or few. Involvement of multiple systems is highly characteristic of dissecting aneurysm as in another arterial disease, polyarteritis nodosa. But the similarity ends there. Dissecting aneurysm is as sudden and dramatic as polyarteritis is subtle and chronic. However, both are great mimickers and hard to prove during life, often leaving the physician with the impression that something is wrong but eluding explanation, and he finds himself making multiple diagnoses to explain varied manifestations.

If dissecting aneurysm is thought of in every condition with abrupt onset that is not readily diagnosed as something else, it will rarely be missed. A precise description of the pain and its radiation is most helpful. Once the diagnosis is suspected, careful bedside examination usually reveals supporting evidence. The electrocardiograms will not be characteristic of an acute myocardial infarction but will probably be abnormal. X-ray studies initially are rarely diagnostic, but serial films may be of great value. Failure to demonstrate free peritoneal gas helps to exclude perforated peptic ulcer. The patient should be closely observed subsequently for murmurs, change in pulsations, and the many other signs and symptoms that occur. The varied nature of these subtle manifestations (as in polyarteritis nodosa) characterizes the disorder. If death does not occur the diagnosis should not be dismissed completely, for many patients recover from the acute episode. Further observation of these patients will show a high incidence of subsequent dissection.

The treatment of dissecting aneurysm is expectant and symptomatic. Complete and prolonged rest appears logical. The patient should probably be kept at rest for at least 6 weeks, but statistics are not available to substantiate or refute this estimated interval. Cellophane wrapping of the aorta has been performed, with survival of the patient. Anticoagulants are illogical. Drugs designed to lower blood pressure may be of some benefit if hypertension persists, but caution should be exercised if renal function is poor; indiscreet tampering with the blood pressure is dangerous. (New England J. Med., Apr. 22, 1954, B. T. Galbraith, M. D. and S. L. Norman, M. D.; St. Mary's and McAlester General Hospitals, McAlester, Okla.)

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Radioactive Gold Intrapericardially

Following the introduction of radioactive colloidal gold (Au^{198}) into clinical medicine by Sheppard, Hahn, and associates, a number of investigators including the authors, have administered the material into pleural and peritoneal spaces in an attempt to control accumulations of fluid secondary to malignant disease. Although the authors had not previously administered radiogold intrapericardially, and could find no report in the literature

of such application, they treated the patient reported in this manner because of the failure of other means to relieve severe distress due to massive pericardial effusion from metastatic carcinoma of the breast.

Radioactive colloidal gold (Au^{198}) has a physical half-life of 2.7 days and emits both beta particles and gamma rays. The beta radiation characteristics are: maximum energy, 0.98 MEV; average energy 0.32 MEV; maximum range in water, 3.8 mm. The gamma rays have energies of 0.12 and 0.41 MEV. Ninety percent of the beta energy is absorbed in the first millimeter of tissue.

To the best of the authors' knowledge, the patient reported was the first to be treated by instillation of radioactive colloidal gold (Au^{198}) into the pericardial sac. Chest roentgenograms during the month following administration of the isotope disclosed decrease of the effusion; the distressing symptoms of syncope and dyspnea also were considerably diminished.

As seen grossly at autopsy and in tissue sections, the gold had a distinct radiation effect on the metastatic tumor tissue without significant damage to the myocardium; such damage would not be expected, because 90% of the beta energy (of Au^{198}) is absorbed in the first millimeter of tissue. The gold also produced radiation effect upon lymphatic metastases in the myocardial syncytium as a result of some of the gold apparently having been taken up by the lymphatic stream.

It is now the authors' impression that a larger dose, for example, one which would have produced 20,000 to 40,000 r. e. p. beta, might well have been used. Such a dose would have enhanced the radiation effect upon the tumor and would in all probability have had no significant additional effect upon the normal tissues. (Ann. Int. Med., 4200 Pine St., Philadelphia 4, Pa., Apr. 1954, LCDR K. P. Bachman (MC) USN, LT C. G. Foster (MC) USNR, LTJG M. A. Jackson (MC) USNR, LT P. H. Shershin (MC) USNR, and CAPT H. C. Oard (MC) USN)

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Change of Address

Please forward requests for change of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

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Transventricular Wounds of the Brain

This report is based on 105 consecutive Korean battle casualties with surgically verified transventricular wounds of the brain treated at Tokyo

Army Hospital from September 1950 through March 1952. The over-all mortality rate was 10.47%.

In this series, wounds of the ventricle were produced by missiles or foreign bodies passing through or into the ventricular system. Actual visualization of the opening into the ventricle at surgery was the basis for diagnosis. There was no definite clinical syndrome characteristic of transventricular wounds even though most of the patients had a high temperature and a stiff neck. The physical findings depended upon the area of the brain involved. A diagnosis of ventricular penetration was suspected when x-ray films showed evidence of the missile canal, outlined by bone fragments, passing through the position normally occupied by the ventricles. The lateral ventricles were most frequently involved, accounting for all cases except 3 in which the third ventricle was penetrated. There were no cases of penetration of the fourth ventricle.

An over-all analysis of over 600 consecutive penetrating wounds of the brain treated during the same period of this report, showed that the patients with ventricular wounds were the sickest and carried the highest mortality rate. This fact has been brought out in previous reports by Cushing, Schwartz, Haynes, and others.

The preoperative management of penetrating wounds of the head has been adequately described elsewhere and is not discussed. Emphasis again must be placed upon the importance of preoperative x-rays, preferably stereoscopic views, with accurate localization of intracranial bone fragments and foreign bodies.

The principles of radical debridement of the brain with removal of devitalized cerebral tissue, clots, bone fragments, pieces of helmet lining, hair, dirt, et cetera, have all been established. The metallic foreign body (missile) is removed, if it can be readily reached without further destruction of vital areas of the brain. Superficial metallic fragments near the cortical surface of the brain at a site distant to the point of penetration are occasionally associated with hematoma.

The open method of debridement through an adequate craniectomy with direct visualization of the missile tract as used by Schwartz, Webster, and others, was the method used in this series. Pentothal sodium induction with endotracheal nitrous oxide-oxygen anesthesia was employed routinely in this series. There were no deaths or complications from the anesthesia which was maintained in a light plane. The scalp, muscles, and pericranium were adequately debrided. It was necessary to perform a craniectomy of such size as to allow for debridement of the dura mater and superficial cortical tissue as well as visualization of the missile canal. A craniectomy of 4-5 cm. in diameter was usually found to be the minimum that could be used. Silver clips were the method of choice for obtaining hemostasis of cortical vessels. Cautery was used sparingly, as it was believed that more extensive thrombosis and necrosis would otherwise occur. No unusual foreign body

reaction was noted about the silver clips in patients subsequently re-operated upon. The softened walls of the missile canal were removed by suction. The canal was inspected with a Frazier lighted retractor and gently palpated for foreign bodies. The subdural space was inspected in all cases as a subdural clot was occasionally encountered. Ventricular clots and foreign bodies when present were removed under direct vision. All wounds were copiously irrigated. Following complete debridement of all space-occupying clots, devitalized cerebral tissue, and foreign bodies, the missile canal remained well retracted. This, no doubt, was also aided by the opening into the ventricular system with free drainage of ventricular fluid. However, if active cerebritis was present with associated edema, there was less tendency for the walls of the missile tract to remain widely separated.

All wounds were closed tightly following debridement unless active cerebritis was present. In the latter cases, instead of the exteriorization method, the wounds were left wide open and the cerebral tissue was repeatedly irrigated with sterile saline solution. Cerebral herniation was controlled with repeated spinal taps. Appropriate antibiotics were given systemically. No intrathecal or intraventricular medications were used. After the cerebritis had subsided, usually in 4 to 6 days, intracranial toilet was accomplished in the operating room and dural closure was achieved with fascial graft or other means. (J. Neurosurg., Mar. 1954, Maj. G. T. Wannamaker, MC, USA; Yale University School of Medicine, New Haven, Conn.)

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Chylothorax

The authors present a simple and specific test for chylothorax due to rupture of the thoracic duct. The patient is fed a fat meal containing a lipophilic coal-tar dye; if the dye color becomes grossly detectable in the pleural fluid obtained by thoracentesis a few hours later, the thoracic duct is leaking alimentary chyle. Regardless of the site of rupture, supradiaphragmatic ligation of the thoracic duct will then prevent further leakage and will cure the patient of the chylothorax.

Chylothorax resulting from traumatic rupture of the thoracic duct is probably not a rare occurrence, yet comparatively few cases have been recorded. With more radical neck and posterior mediastinal dissections being done the incidence of surgical trauma to the thoracic duct can be expected to increase. Because so many operative procedures endanger the duct every surgeon should recognize the consequences and know the course to follow when the thoracic duct is accidentally severed.

Nontraumatic chylothorax, usually following rupture due to neoplastic invasion or mechanical obstruction of the duct, is more common, but the diagnosis seldom is made before autopsy. Because of the gravity of the underlying disease less interest may be shown in diagnosing and surgically

correcting the leaking vessel. Even in the presence of mediastinal lymphoblastoma or metastases, ligation of the duct may be worthwhile, preventing further depletion of vital fluids, decreasing dyspnea and the need for frequent thoracenteses.

The value of any curative procedure depends upon proper recognition of the disease. The diagnosis of chylothorax can be very difficult if only the chemical characteristics and gross appearance of the pleural fluid are depended on. Chyle often cannot be identified by the usual methods of fat staining of smears of pleural fluid. Quantitative fat determinations of chylaceous fluids are expensive, usually uninformative, and sometimes misleading. Some of the characteristics of chyle may be simulated in other conditions, such as in sterile or tuberculous empyema or in malignancy with pleural or mediastinal extension. Occasionally, as in one of the cases presented, there may be a known mediastinal malignancy with pleural metastases as well as a ruptured duct.

By a simple in vivo test, such as the ingestion of a dyed fat which is later recoverable from the pleural chyle, many cases can be discovered which might otherwise remain undiagnosed. Not only does this test prove that the pleural fluid is chyle, it also establishes that the thoracic duct fistula is still open and leaking chyle into the pleural space.

The basis of this report is 6 cases of chylothorax and 1 of chyloperitoneum in which the diagnosis was made or verified by the use of oral lipophilic dyes. Three of these cases responded favorably to transthoracic ligation of the duct, 2 closed spontaneously, and the others, which were not ligated, died. Each of these patients had presented difficulties in diagnosis, and it is doubtful if several would have been recognized without the use of the lipophilic dye test. In addition to those discussed, several other cases of suspected chylaceous pleural fluid were differentiated from chylothorax by similar tests. The authors believe that the incidence of chylothorax is greater than is generally believed, and that the routine use of this simple dye test in all sterile, turbid, persisting pleural effusions may aid in the discovery of many otherwise unrecognizable cases of chylothorax.

A simple and effective means of diagnosing chylothorax is presented. When thoracentesis is performed several hours after the patient has eaten a fat meal containing lipophilic dye the color of the dye can be identified in the pleural fluid if the thoracic duct is ruptured. This test not only identifies the pleural fluid as being alimentary chyle but also establishes the fact that the thoracic duct is still leaking. The test is simple, safe, inexpensive, and specific, and should be used in all cases of turbid, sterile, alkaline, pleural fluid which tends to recur after removal by thoracentesis. (Dis. Chest, Apr. 1954, R.G. Klepser, M.D. and J. F. Berry, M.D.; Georgetown University Medical School, Washington, D.C.)

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Primary Carcinoma of the Gallbladder

The etiology of carcinoma of the gallbladder is still not well understood but there seems to be little question of its frequent relationship to gallstones. In most tumors several factors are probably working concomitantly before malignant changes appear and gallbladder carcinomas are presumably no exception. Experimental attempts to produce tumors by introducing gallstones into healthy gallbladders generally have not been successful and certainly the vast majority of patients developing gallstones do not develop cholecystic carcinomas. Constant and repeated irritation, however, has been shown many times to potentiate carcinogenic effects in animals, and it is reasonable to presume that it may in humans.

The presenting signs and symptoms were quite variable but some were repeatedly encountered. Of the 45 patients, 35 or 78% complained of pain in the region of the gallbladder, while the remaining 10 had no pain. In many the pain had become constant by the time of their admission to the hospital. Nausea too was frequently experienced. It was found in 22 or approximately 50% of the patients. Weight loss was the most constant finding and was present in 38 patients. This varied from rather small amounts to 50 pounds. The majority of patients lost more than 10 pounds. Profound weakness was a prominent complaint in 12 patients.

Jaundice was present in 21 patients at the time of admission and in 9 of these it was painless. Although painless jaundice is often associated with pancreatic tumors, the possibility of primary biliary duct or gallbladder cancer being the source of such a condition should not be overlooked when it is encountered.

Hepatic enlargement was found in 30 of the 45 patients, and an additional mass in the region of the gallbladder was palpated in 24. In 1 patient the tumor was actually fungating through the skin of the abdomen.

Of considerable interest was the fact that 18 patients had noticed a recent distinct change in their old symptoms of gallbladder disease. The change in symptomatology was no doubt due to a change in the fundamental disease giving rise to it, that is, the development of carcinoma in the gallbladder containing stones.

The duration of symptoms of gallbladder disease prior to admission to the hospital was also of interest. It was very variable as would be expected, and many had had symptoms of gallstones for years. These are the patients who presumably could have been prevented from developing tumors had cholecystectomy been carried out when the symptoms of gallbladder disease first appeared.

The shortest period during which a patient had symptoms was 9 days and the longest was 45 years.

The preoperative diagnosis varied greatly but in 11 the diagnosis of carcinoma of the gallbladder or biliary tree was made correctly, and in an additional 8 patients some form of abdominal carcinoma was suspected.

Chronic cholecystitis was diagnosed 11 times, acute cholecystitis 6 times, common duct stone 3 times, and "obstructive jaundice" 5 times.

Forty-four of these 45 patients were subjected to laparotomy and at operation only 5 were found to have a lesion that the surgeon considered possibly curable. In all others it was believed to be clearly incurable.

Few, if any, tumors carry a worse prognosis than carcinoma of the gallbladder, and it would seem unlikely that a significant improvement in the end results of this disease will occur with the present means of diagnosis and treatment.

Once developed, except in its very early stages when this tumor itself is asymptomatic, this carcinoma is usually incurable by any presently available means. (Surg., Gynec. & Obst., May 1954, B. Roberts, M.D.; University of Pennsylvania, Philadelphia, Pa.)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

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Malignant Lymphoma of the Stomach

Malignant lymphoma of the stomach, while not a common neoplasm, occurs often enough and presents sufficiently varied clinical findings and roentgen appearances to warrant consideration. A series of 25 microscopically proved cases was analyzed with the object of determining three major points: First, were the roentgen findings sufficiently distinctive to warrant giving a primary diagnosis of lymphoma? Second, could the roentgen findings be correlated with the gross and microscopic pathologic changes? Third, what mode of therapy would give the best results?

This series was collected from several hospitals. The original pathologic and microscopic impression was confirmed by one of the authors (CMW) in all but 3 instances. In 3 cases roentgenograms were not available for the authors' personal study, but in each of these the microscopic diagnosis was corroborated and the clinical records were available for study.

The frequency, in this series, of a pattern of symptoms compatible with a clinical diagnosis of peptic ulcer, was striking. Nearly one-half of the patients were considered to have peptic ulcer on the basis of the initial history and physical examination. One must be on the alert for a prolonged history, particularly when past gastrointestinal series have been negative. Two patients had careful x-ray studies and were considered to be without gastric disease within 6 months of definitive diagnosis at operation. In each

instance, clear-cut, roentgenologically demonstrable gross pathologic changes supervened prior to surgery.

Epigastric tenderness and rigidity were the most constant findings on physical examination, while a palpable mass was present in 5 patients.

An analysis of this series leads the authors to believe that there are no roentgen findings pathognomonic of gastric lymphoma. The diagnosis might be inferred from massive gastric involvement by bulky lesions, rigidity of the gastric wall, or distortion of mucosal folds. There is no correlation between roentgen and gross findings on the one hand and microscopic appearance or type on the other.

Surgery and postoperative roentgen therapy yield the best results; of those patients treated by x-ray therapy alone, only 1 is known to be living and well. In 1 patient, in spite of roentgen therapy, the antral mass progressed in size and extended during a period of observation of 10 months. (Radiology, Apr. 1954, I. R. Berger, M. D., B. B. Gay, Jr., M. D., and C. M. Whorton, M. D.; Veterans Administration Hospital, Atlanta, Ga.)

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Roentgen Therapy of Hepatic Metastases

Metastatic cancer is found in the liver in about one-third of the cases of malignant disease coming to autopsy, and hepatic failure is often the immediate cause of death. Sometimes there may be few or no symptoms, but in many patients the last few months of life are heavy with suffering from pain, prostration, abdominal distention, and fever. Medical treatment seldom affords much relief of such symptoms.

The common cancers such as those of the breast, lung, stomach, colon, and rectum are also those which have a high incidence of liver metastases--25 to 50%--so that the increasingly successful control of the primary tumors by modern methods of treatment is only too often frustrated by the early development of liver metastases.

Karnofsky and his associates showed that, with nitrogen mustard, tumor regression occurred without an initial period of edema. They, therefore, suggested that if roentgen therapy was immediately preceded by a single intravenous dose of nitrogen mustard--0.4 mg. per kilogram of body weight--the initial radiation edema would be prevented, and an adequate tumor dose could be given in a few days instead of weeks.

In this series the whole liver has been irradiated through opposed anterior and posterior fields at 1,000 kv., half-value layer 3.8 mm. Pb; with this quality radiation, the tissue dose throughout the irradiated volume is approximately the same as the skin dose on each field. The area of each field was seldom less than 400 sq. cm., so that the integral dose was high, ranging from 25 to over 100 megagram-r. There was, however, no evidence of systemic radiation intoxication even with the highest integral dose, nor did irradiation of the liver aggravate the temporary bone marrow depression produced by nitrogen mustard.

The dominant symptoms of hepatic metastases are prostration, anorexia, and pain; satisfactory relief of weakness and fatigue was obtained in 17 out of 31 cases, of anorexia in 20 of 31 cases, and of pain in 26 of 30 cases. The relief of pain in so many instances is especially gratifying; being due to stretching of the hepatic ligaments and capsule, it is obstinately resistant to all forms of medication, and there is the further difficulty that in the presence of liver damage opiates and sedatives are poorly tolerated and perhaps tend to precipitate the onset of hepatic coma. Abdominal distention was relieved in 12 out of 17 cases, nausea and vomiting in 7 of 16 and sweating and fever in 11 of 18 cases. Profuse sweating, especially at night, is one of the most trying symptoms of hepatic metastases, and its cessation during treatment is a useful sign that improvement in the patient's general condition will follow.

The results of treatment of hepatic metastases secondary to carcinoma of the breast, bronchus, and gastrointestinal tract, are reported in 36 patients; symptomatic improvement was obtained in 26 patients.

No evidence of liver damage was observed at any dose level. The dose levels of 3,500 r and 3,750 r, however, carry an increasing risk of damage to the mucous membrane of the gastrointestinal tract, and particularly to the transverse colon. (Am. J. Roentgenol., May 1954, R. Phillips, D. A. Karnofsky, L. D. Hamilton, and J. J. Nickson; Memorial Center for Cancer and Allied Diseases, New York, N. Y.)

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Acute Lung Abscess

The present material consists of 37 cases which meet the criteria of acute uncomplicated lung abscess clinically and roentgenographically. All patients were admitted to the hospital within 2 to 10 days of the onset of their illness. The classical complaints were fever, chest pain, and cough productive of foul sputum. The predisposing causes were dental extractions or exposure to cold, following either submersion or drunkenness. In all of the cases the diagnosis was suspected clinically when the patients were first seen, either because of history, foul sputum, clubbing, acute illness with definite anemia, physical signs, or the invariable presence of roentgenographic evidence of cavity with fluid level.

The patients were treated with penicillin, penicillin with sulfadiazine, chlortetracycline (Aureomycin), or oxytetracycline (Terramycin). If the results seemed slow or inadequate, various combinations of these drugs were used.

In all of these cases, definite improvement was noted early in the course of medical treatment. Thus, with continued optimal medical management, complications failed to occur, clinical cures were attained, and resort to surgical procedures obviated.

In most of the cases, evidence of clinical cure time, as indicated by loss of fever, reduction in pulse rate and sputum volume, clearing of foul odor of expectoration, and disappearance of the toxic, severely anemic, and anxious state, was observed between the eighth and thirty-eighth days. Desire for food and an interest in surroundings began to return. The patient could be permitted self-help and bathroom privileges. In a few cases in which response tended to be slow, the addition of one of the other drugs or a change to another antimicrobial brought about the desired benefit.

A further period of treatment beyond the average 24-day clinical cure time was necessary in order to obtain roentgenographic evidence of complete healing of the lung abscess. This stage is considered the total cure time and was attained in a maximum of 112 days and within an average time of approximately 60 days. During this period most patients enjoyed an increasing degree of physical activity, and their chest films showed progressive healing of the abscessed lung areas. There has been no recurrence of pulmonary suppuration and no need for surgical intervention.

The results in the present series indicate that no dramatic response can be expected from either Aureomycin or Terramycin in the treatment of acute lung abscess. In most cases penicillin seems to be just as effective provided dosage schedules are strictly adhered to, therapy is prolonged sufficiently, and due attention is given to supportive treatment, good nursing care, postural drainage, and bronchoscopy when indicated. Sulfadiazine as an adjunct to penicillin is desirable when not specifically contraindicated, but is not mandatory.

Aureomycin and Terramycin, because of their greater antimicrobial range, do seem to succeed when penicillin occasionally fails, but even here one must not be led to quick conclusions. It may be that penicillin had laid the tedious groundwork for a relatively easy victory by the tetracycline drugs. The administration of these drugs by the oral route is of distinct advantage, but this must be weighed against their greater cost and the possible danger of emergence of pathogenic yeasts following the excessively thorough bacterial elimination they produce. Disturbances of normal body flora must also be taken into account when prolonged administration is contemplated. Vitamin K deficiencies which may follow destruction of the intestinal flora by Aureomycin and Terramycin may possibly cause bleeding from abscess cavities, which are prone to bleed even in the absence of vitamin K deficiency.

All things considered, it is believed to be wisest to reserve drugs of the tetracycline series for unusually stubborn cases, in which cultures show that the causative organisms are generically or individually resistant to penicillin, or when penicillin has been given a fair trial and has failed to produce an adequate response. (Am. Rev. Tuberc., May 1954, S. A. Gittens and J. P. Mihaly; Harlem Hospital, New York, N. Y.)

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Shock Associated With Myocardial Infarction

Results of an investigation recently completed at the Los Angeles County Hospital disclose that the promptness with which measures for combating shock accompanying acute myocardial infarction are instituted is a key factor in recovery, overshadowing in importance the particular method or combination of methods used in bringing shock under control.

In this article, evidence is presented of the importance of the time element in the successful treatment of the shock syndrome when associated with myocardial infarction. Also, results obtained with various modes of treatment at the Los Angeles County Hospital during an 18-month period in 1951 and 1952 are discussed. Statistics for a comparable 18-month period (1949-51) in which specific antishock measures were not employed afford an additional basis for evaluation of measures employed in the treatment of shock in the 1951-52 period.

For the purposes of this investigation, shock was defined as a condition of marked hypotension, lasting for an hour or longer, and accompanied by signs of peripheral circulatory collapse. In a patient whose blood pressure was previously within normal limits, a systolic blood pressure reading of 80 mm. Hg or below was accepted as evidence of shock. In the formerly hypertensive patient, a systolic blood pressure of 100 mm. Hg or below evidenced shock.

One hundred and thirty-four patients were first treated by such obvious routine measures as proper positioning, relief from pain and cold, easing of anxiety, and control of other factors which might contribute to shock. Continuous administration of oxygen to each patient through a nasal catheter or mask, or by means of intermittent positive pressure, assured a sufficient supply of oxygen at all times. Phlebotomy or administration of ethyl alcohol vapor was required in instances of persistent failure.

Morphine sulfate, administered intravenously, proved of value in relieving shock, a pressor effect occurring promptly even in comatose patients. (The authors believe that morphine's advantages outweigh certain undesirable features, such as the aggravation of anoxemia by respiratory depression. Nevertheless, overtreatment with morphine can be detrimental, particularly in the elderly patient.)

Patients with congestive heart failure received intravenous doses of digitalis, strophanthus, or other glycosides in order to support fully the uninfarcted myocardium. In the absence of heart block, premedication with quinidine proved a worthwhile procedure.

Arrhythmias were quickly brought under control, and anticoagulants were administered routinely unless a definite contraindication existed.

If shock was not relieved by "routine" methods, additional measures were tried. Nine patients received intravenous infusions: a pressor effect was obtained in 3 instances, and shock was controlled in 2. Retrograde arterial infusions were given to 25 patients.

One hundred and five episodes of shock were treated with 3 of the newer sympathomimetic amines: norepinephrine, methoxamine, and isopropylnorepinephrine. Each proved of value, particularly with early treatment.

The promptness with which antishock treatment is instituted is apparently more important than the particular method used. "Routine" measures, venous infusions, retrograde arterial infusions, and the newer sympathomimetic amines are all of value in the treatment of shock associated with myocardial infarction. Cortisone and cholinesterase may be of value in restoring lost responses to antishock therapy. (Circulation, Apr. 1954, G.C. Griffith, M.D., W.B. Wallace, M.D., B. Cochran, Jr., M.D., W.E. Nerlich, M.D., and W.G. Frasher, M.D.; Los Angeles County Hospital, Los Angeles, Calif.)

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Determination of Gallbladder Function

This report describes the results obtained with a new intravenous method for the determination of gallbladder function in a series of 102 patients. The method employs radioactive diiodofluorescein (DIF) as a tracer agent and the scintillation counter to detect the gamma radiation from I^{131}

Radioactive diiodofluorescein was chosen as the tracer agent because it is rapidly removed from the blood stream and excreted in the bile. DIF has been used extensively in other investigations, and no toxic side-reactions have been observed. I^{131} emits gamma quanta of sufficient intensity to be detected externally by the scintillation counter. The counter is mounted on an automatic scanning device termed the scintiscanner.

In preliminary experiments it was observed that DIF appears in the bile within 10 minutes after intravenous injection and reaches a maximal concentration 30 to 60 minutes thereafter. Accordingly, the initial scan of the right upper quadrant is begun 30 minutes after injection of the tracer agent in order to insure concentration of the DIF within the gallbladder.

The major limitations of oral cholecystography are: (1) the time delay required to obtain radiographs, (2) variable absorption of oral contrast substances, and (3) the inability to administer oral medication in those patients who are vomiting or require gastric suction. In these instances, a reliable nontoxic, intravenous method of determining the function of the gallbladder is a useful diagnostic aid.

The results in this series indicate that scintography is a reliable index of the function of the gallbladder. The absence of undesirable side-reactions is due to the small amount of the tracer agent required to perform the test, less than 2% of the amount required for conventional intravenous methods. One limitation of this technique is the inability to visualize calculi. However, it has been observed that the presence of calculi within the gallbladder

results in most instances in diminished or absent function of the gallbladder. For this reason, it is believed that the inability to delineate calculi is not a serious limitation of this technique. (Arch. Surg., Apr. 1954, L. A. Stirrett, M. D. and E. T. Yuhl, M. D.; University of California School of Medicine, Los Angeles, Calif.)

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Functional Uterine Bleeding

Functional uterine bleeding may be defined as abnormal and excessive bleeding which occurs because of physiologic disturbances and not pathologic processes. Hormonal dysfunction is the chief cause, but nutritional factors, vitamin deficiencies, and nervous and psychogenic factors play important and contributory roles. Bleeding associated with pathologic lesions such as endometrial polyps, pelvic inflammatory disease, endometriosis, and, to a great extent, fibromyomata of the uterus, may no longer be excluded, because bleeding in such instances may be brought under control in a manner similar to that employed in purely functional disturbances. Pathologic factors for bleeding which do not and cannot be expected to respond to hormonal therapy are cervical polyps, cervical cancer, uterine malignant lesions, carcinoma of the fallopian tubes, ectopic pregnancy, misconceptions, and blood dyscrasias.

Experience with the use of gonadal steroid hormones in therapy of various gynecic disorders has crystallized sufficiently to warrant certain categorical statements insofar as they pertain to the phenomenon of uterine bleeding: (1) Estrogens have been employed successfully for those patients in whom the uterine bleeding occurred from a cystic glandular hyperplasia or a persistent estrogenic endometrium. (2) Progesterone has been successfully employed for those patients in whom the uterine bleeding occurred from an imperfect progestinal or mixed type of endometrium, as well as for those with an estrogenic endometrium. (3) Testosterone has been successfully employed for those patients in whom bleeding was associated with uterine fibromyomata, adenomyosis, or endometriosis.

The administration of a combination of gonadal steroids containing 6 mg. of estrone or its equivalent (1.66 mg. estradiol benzoate), 25 mg. progesterone, and 25 mg. testosterone, will take care of functional bleeding due to various causes in about 95% of all cases. The combined gonadal steroid therapy administered over a period of 5 days usually results in arrest of bleeding within 6 to 48 hours. Withdrawal bleeding that simulates a normal menstrual period (sometimes excessive during the first 2 days) will ensue from 2 to 7 days after cessation of therapy. Although combined estrogen and progesterone therapy is satisfactory in most cases, the addition of testosterone seems to decrease the amount of withdrawal bleeding. Some 20 days later, a course of oral progesterone for buccal absorption

(50 mg. per day for 5 days), or pregnenolone for ingestion (30 mg. per day for 5 days), or progesterone by intramuscular injection (10 mg. daily for 3 days), may be administered to induce another withdrawal period. This progesterone therapy may be carried on at monthly intervals until it is established that cyclic ovulatory menses have begun to take place.

A second method of therapy is the use of intravenous estrone sulfate. This is of particular value in young girls and in those women in whom bleeding is acute and the patient exsanguinated. In such cases it is best to delay the withdrawal period for several weeks. It is advisable to use intravenous estrogen every 4 to 6 hours until bleeding is arrested. After initial arrest of bleeding, oral estrogens in decreasing doses over a period of 25 days are administered, and a withdrawal period will thus be delayed until the patient has had an opportunity to recover her balance.

Care must be exercised in the selection of patients, because moderately good, though temporary, results may also be obtained in patients with ectopic pregnancy and in cases of bleeding due to endometrial carcinoma. Dilatation and curettage should be perfofmed in all those patients in whom there is the slightest suspicion of malignancy, in all patients approaching or beyond the menopause, and in those who fail to respond satisfactorily to a course of therapy. In young girls and in those women who have had a curettage or repeated curettage in the immediate past, it should not, as a rule, be necessary to perform this procedure. (M. Ann., District of Columbia, Apr. 1954, 1718 M St., N. W., Washington 6, D. C.; R. B. Greenblatt, M. D.)

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Detection and Diagnosis of Oral Malignancies

The dentist has a distinct obligation to use every scientific means at his disposal to detect and diagnose oral tumors. The necessary knowledge and the technics of securing biopsy specimens and associated clinical data must be considered an integral part of his professional responsibilities in meeting the challenge of neoplastic disease.

The role of the dental profession in the detection of oral cancer is being increasingly amplified. It is stated that over 30,000 potential cancer deaths may be prevented during the next decade through early diagnosis by the dentist, followed by proper surgical or radiation therapy by the physician.

Careful examination and clinical evaluation of any minor abnormalities in the oral mucosa and associated structures must be the rule, because advanced carcinomas, which are more easily recognized, obviously have less chance for satisfactory treatment.

While the taking of a tissue specimen for microscopic examination and the assembly of the clinical data are relatively simple procedures, these are the procedures most frequently neglected by the general practitioner.

Because general practitioners constitute the vast majority of the profession, the need for emphasis on understanding of and systematic reflection on this problem becomes apparent.

The use of the biopsy as a diagnostic aid is by no means limited to suspected malignant change, but is invaluable in differentiating some of the inflammatory and degenerative processes encountered in oral pathologic conditions. As in cavity preparation, an orderly procedure is mandatory; each step must be executed to provide maximum information.

Any ulceration or swelling of the oral mucosa or associated structures which does not respond to conservative treatment over a 2 weeks' period should be considered suspicious and evaluated on the basis of the patient's history and a clinical examination.

In the clinical examination, the following data should be ascertained by inspection and palpation of suspicious lesions or regions: (1) Size of lesion or lesions expressed in centimeters or millimeters; (2) consistency of lesion, the consistency of the lesion--hard, soft, or fluctuant--often indicates the true character of the process and aids in the establishment of a positive diagnosis; and (3) anatomical location and pathological characteristics.

A careful review of the assembled data is imperative to see that all pertinent details relative to the case have been secured. The collected material, which should include roentgenograms when necessary, is forwarded to the pathologist for diagnosis.

While the biopsy is a most essential diagnostic aid, a negative report from the pathologist should not be accepted as final if the region in question does not yield to treatment or gives evidence of recurrence. Repeated biopsies often are necessary together with consultations with the pathologist for suggestions in regard to securing a more representative specimen. Once the diagnosis of cancer has been made, the patient should be referred immediately for medical consultation. In every instance, it should be ascertained whether the patient reported for consultation.

There are few diagnoses as important as the early recognition of cancer, because the life of the patient often hangs in the balance. (J. Am. Dent. A., Apr. 1954, W. R. Patterson, D. D. S.; 217-219 State National Bank Bldg., Texarkana, Arkansas-Texas)

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Functional Effect of Polyvinylpyrrolidone

Polyvinylpyrrolidone meets the criteria demanded for a satisfactory plasma expander except that a small percentage is not excreted and is retained in the various tissues. The purpose of this study was to determine any changes, immediate or delayed, in the hematopoietic, renal, and/or hepatic systems that might be caused by polyvinylpyrrolidone.

Polyvinylpyrrolidone (PVP) is one of a group of macromolecular colloids that are capable of increasing and maintaining blood volume by means of their osmotic pressure, hydrophilic properties, and slow elimination from the vascular system.

In the quantities employed in this study, the authors' data indicate that PVP is neither nephrotoxic nor hepatotoxic, nor does it seem to have any permanent deleterious effect on the number and function of the formed elements of the blood.

Laboratory studies of the hematopoietic, hepatic, and renal systems were carried out at intervals (2 for as long as 12 months) in each of 129 patients who received PVP. There were 29 deaths in this series, of which 13 came to autopsy.

PVP is an effective and safe replacement solution for the successful treatment of various types of shock. It provides prompt support of the circulation when blood is not immediately available. This emergency use of PVP allows time for careful typing and cross-matching, and thus results in safer blood transfusions. It may be used judiciously to supplement blood transfusions and thereby conserve blood and it is an effective and safe plasma substitute for the successful control of hemoconcentration. PVP is not antigenic, allergenic, pyrogenic, toxic, or infectious and does not interfere with blood grouping, typing, or cross-matching.

No permanent physiologic impairment was observed in the authors' series following the use of polyvinylpyrrolidone either in the treatment of shock or of hemoconcentration. (Ann. Surg., Apr. 1954, W. G. Bernhard, M. D., H. Grubin, M. D., A. H. Islami, M. D., H. Hakim, M. D., R. Brinning, M. D., and R. Knauf, M. T.; Hospital of St. Barnabas and for Women and Children, Newark, N. J.)

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Management of Pain With Nerve Blocks

During the past several years, the authors have been interested in the management of pain resulting from nonsurgical diseases and have devoted much of their time to this phase of anesthesiology. Of particular interest has been the management of intractable pain of causalgia, neuralgia, and malignant disease. The authors' activities have stimulated a great deal of interest among clinicians of their community and consequently they have been afforded the opportunity of managing a large number of cases. All of the results of these experiences are being published elsewhere.

Because the pain frequently involved structures supplied by more than one branch of the same nerve or more than one nerve, several block procedures were often done at the same time. In such instances the procedure is counted as one, regardless of the number of nerves injected.

Relief was recorded after an adequate interval following each procedure and when the patient was discharged from the pain clinic. The patient was asked to state whether the pain was 0, 25, 50, 75, or 100% relieved. Because this is usually a difficult question for the patients to answer because they cannot objectively evaluate the degree of pain before and after the block, their answers were carefully corroborated with the observations of the nursing, resident, and attending staff regarding the amount of opiates or other analgesics necessary and with the complaints of the patient and the objective evaluation of the patient's comfort. Most of the patients were followed at home by the anesthesiologist or the patient's physician, or both. Relief was considered complete if well over 75% of the pain was relieved and the patient tolerated gradual decrease of narcotic analgesics (it should be stressed that it is unwise suddenly to withdraw all narcotic analgesics in patients who have cancer pain); partial relief was recorded if 25 to 75% of the pain was relieved; slight or no relief was recorded if over 25% of the pain was present at the time of discharge. In most patients, relief, when present, lasted until death.

The pain associated with advanced inoperable or recurrent malignant lesions is a difficult clinical problem. The anesthesiologist can make a significant contribution to the management of this problem by applying his knowledge, skill, and dexterity in using regional anesthesia. Analgesic block, when properly executed and effective, affords adequate relief without adding to the patient's discomfort.

For pain of the face, mouth, tongue, throat, and neck, alcohol injections of the trigeminal nerve or its branches, the glossopharyngeal and vagus nerves, and/or the upper cervical spinal nerves are usually very effective. Pain below the neck can be controlled for weeks or months with subarachnoid alcohol block, paravertebral block, or injections of peripheral or intercostal nerves. Because in many of these cases the sympathetic nervous system is involved in the pain mechanism, sympathetic nerve blocks occasionally are necessary to alleviate the pain completely.

Of a group of 194 patients with severe cancer pain treated with analgesic block, 52.7% obtained complete relief, 33.5% partial relief which was sufficient to be considered very worth while by the patient and physician, and the remainder obtained minimal or no relief.

Minor complications occurred in 21.1% of the patients and serious complications in 14.9%. These complications included corneal ulcers in 4, unilateral masticatory weakness in 22, weakness or paralysis of one or more extremities in 26, bladder or rectal dysfunction, or both, in 12, postinjection alcoholic neuritis in 7, and orthostatic hypotension in 1. (Anesthesiology, May 1954, J. J. Bonica, M. D. ; Tacoma General Hospital, Tacoma, Wash.)

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Thymic Cysts

Although both the neck and the mediastinum are fairly common sites for cystic lesions of various types, cysts arising in the thymus gland are encountered most infrequently. Virtually all cysts of thymic origin reported in the early literature were found in syphilitic infants and were identified exclusively at necropsy. Within the last decade a different variety of thymic cyst has been observed, and lesions of this type have been resected from both the neck and the mediastinum. Excision of tumors of the thymus gland has become commonplace in recent years and large series of cases treated in this manner have been reported by Seybold and his associates, Blalock, and others, yet only a few nonsyphilitic thymic cysts have been recorded in the literature.

Blades and Laipply, in extensive reports of mediastinal tumors and cysts, do not mention this lesion. The rarity of cysts of the thymus is attested by the fact that the literature contains reports of only 8 which have been resected. Of these, 4 were removed from the neck, 2 from the mediastinum, and 2 by a combined cervical and mediastinal approach. None of these 8 patients was syphilitic. This report reviews the literature concerning thymic cysts and records 2 such lesions which were excised.

The authors believe that thymic cysts may be divided logically into 3 groups: (1) congenital, (2) inflammatory, and (3) neoplastic. The nonneoplastic, noninflammatory cysts of the thymus reported here are probably congenital in origin, in that a congenital defect may have been present in the form of a patent thymic or thymopharyngeal duct persisting until such time as fluid or hemorrhagic distention occurred. Why this happens is not known. Cysts resulting from infection appear invariably to be due to syphilis. Although rather common in the past, thymic cysts of this etiology are now rarely encountered. Cysts occurring in thymic neoplasms can probably be attributed to degeneration and necrosis of the tumor.

The preoperative diagnosis of a thymic cyst is presumptive. Any undiagnosed cervical or anterior mediastinal mass may represent such a lesion. The presence of a mass that could be a cyst of the thymus is the indication for its removal. The cyst should be completely excised. This is usually accomplished either through a cervical or thoracic approach dependent upon the location of the mass. At times a combined approach may be required in order to accomplish complete removal of a thymic cyst which lies partly in the neck and partly in the mediastinum.

An accurate preoperative diagnosis of these lesions is usually impossible. The treatment of choice is total excision. (J. Thoracic Surg., May 1954, LT W. G. Krech (MC) USN, CAPT C. F. Storey (MC) USN, and CDR W. C. Umiker (MC) USN; U. S. Naval Hospital, St. Albans, L. I., N. Y.)

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Amputations and Enucleations

There were 548 cases of amputation and 150 cases of eye enucleation among Navy and Marine Corps casualties resulting from the fighting in Korea. Thus, for every 1,000 men taken up on the sick list for wounds in action, 21 had surgical amputations and 6 had eye enucleations. These are provisional data derived from a register for all Navy and Marine Corps casualties who were wounded in action and had a subsequent amputation of a limb or part of a limb as reported on NavMed-F. Amputations among Navy and Marine Corps personnel who suffered from frostbite but who were not wounded in action are not included in this report.

The severest losses in Korea were suffered in the early part of the conflict and nearly one-third of the total amputations among battle casualties were incurred in the first 6 months of hostilities. More than 96% of the amputations occurred among Marine Corps personnel. The majority of Navy men who had suffered amputations (14 out of a total of 21) were hospital corpsmen. In the closing months of 1950 there were 278 battle casualties taken up on the sick list who also suffered frostbite, 72 of which required amputations. Frostbite alone was the immediate cause of 58 of these 72 amputations, although each person suffered wounds which were not directly related to the site of the amputation.

Only 16% of the 548 amputees returned to a duty status. With 1 exception all who were restored to duty suffered loss of only fingers or toes. Of special interest is the unusual case of a Navy hospital corpsman with over 10 years of service. A traumatic amputation (primary wound) in October 1951 necessitated a surgical amputation above the right knee in December. The Navy Department permitted his return to active duty in September 1952 because "his prosthesis was most successful and he was considered so well trained and motivated."

In about one-third of the cases the amputations were limited to fingers or toes or both. Fingers were more frequently amputated than toes. The remainder of the cases were more serious and involved the loss of a larger part of the entire upper or lower extremity and some involved more than one site. The lower leg or legs were stated as the site of amputation in 194 cases--more than any other site. Next in order of magnitude was the thigh--being amputated in 105 cases. In 52 cases the amputation was of a hand, forearm, or upper arm, while in only 22 cases was there an amputation of a foot or feet.

From the beginning of the Korean campaign in mid-1950 to the truce which ended the fighting in July 1953 battle wounds were responsible for 150 cases of eye enucleation. These 150 cases exclude 46 casualties blinded in one eye and 10 blinded in both eyes without enucleation. Three men had both the loss of one eye and amputation of an extremity, and 3 others suffered enucleation of both eyes. In addition to loss of both his eyes,

1 man had an amputation of his left foot. Only 5 of the 150 enucleation patients were returned to duty after the removal of an eye. All others, exclusive of 4 cases still under treatment at the end of 1953, were medically separated from the service.

The 548 amputees spent over 120,000 treatment days on the sick list and the 150 enucleation patients accumulated an additional 30,000 sick days. This amounted to an average of 222 sick days per amputation case and 197 days per enucleation case. The time under treatment varied from an average of 201 days for fingers to 320 days for amputation of 3 or 4 extremities. One factor contributing to the length of stay of amputation cases was the concurrent treatment of wound damage to another anatomical part. The majority of amputee cases suffered such additional wounds. (Statistics of Navy Medicine, May 1954, Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C.)

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Military Medical Section Meeting
American Medical Association
San Francisco, Calif. 23-25 June 1954

War casualties today and in the future will not be confined to the man in uniform, according to Major General Harry G. Armstrong, Surgeon General of the Air Force and chairman of the AMA Military Medicine Section. "Because our civilian population could receive injuries previously limited to the combat soldier the discussions by experts in military medicine at the Military Medicine Section of the AMA in San Francisco, 23-25 June, will attract the attention of all physicians and civilian defense organizations," he said.

At the 3-day scientific meeting, military medical authorities will discuss retinal burns produced by atomic flash, initial care of the severely wounded, artificial grafts in military surgery, a new rapid test for determining antibiotic treatment, and the medical experiences of physicians who were Communist prisoners in North Korea.

Military medicine experts scheduled to present scientific papers are: Major General Harry G. Armstrong; Major Curtis P. Artz, Surgical Research Unit, Brooke Army Medical Center, Fort Sam Houston, Tex.; Captain Robert B. Brown, U.S. Navy, Chief of Surgery, U.S. Naval Hospital, Bethesda, Md.; Captain E. B. Coyl, U.S. Navy Medical School, Bethesda; Colonel Victor Byones, Surgeon's Office, U.S. Air Force in Europe; Lt. Colonel Vincent M. Downey, USAF School of Aviation Medicine, Randolph Air Force Base, Tex.; Captain Ashton Graybiel, U.S. Naval School of Aviation Medicine, Pensacola, Fla.; Colonel Thomas W. Mattingly, Walter Reed Army Medical Center, Washington, D.C.; Brigadier General Otis Benson,

Office of the Surgeon General, Headquarters U.S. Air Force, Washington, D.C.; and Captain Clarence L. Anderson, Letterman Army Hospital, San Francisco, Calif.

Civilian medical leaders who will speak before the military medicine section include Dr. Frank B. Berry, Assistant Secretary of Defense (Health and Medical); Dr. Louis H. Bauer of New York City, Secretary General of the World Medical Association; and Dr. Stanley Olson, Dean of Baylor University College of Medicine.

Point credits will be awarded eligible Reserve officers on inactive duty who attend the meetings. Reserve naval medical officers, to obtain point credits, must register with the representative of the Bureau of Medicine and Surgery at the Meeting. (Military Medical Section, AMA)

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Board Certifications

American Board of Anesthesiology

LT John J. Marra (MC) USN
CDR Daniel M. Pino (MC) USN

American Board of Internal Medicine

LT Warren D. Brill (MC) USNR
CDR Bruce L. Canaga, Jr. (MC) USN
LT Francis L. Giknis (MC) USN
LT Wilford R. Hansen (MC) USNR
LT Charles E. Kiely (MC) USNR
LT Robert W. Sharp, Jr. (MC) USN

American Board of Ophthalmology

LT Harry B. McGee (MC) USNR (Inact.)

American Board of Pediatrics

LT Eran O. Burgert, Jr. (MC) USNR (Inact.)
LT John C. W. Campbell (MC) USN

American Board of Radiology

LT Robert S. Goldberg (MC) USNR (Diagnostic Roentgenology)

American Board of Surgery

LT Herman R. Moore, Jr. (MC) USNR
CDR David P. Osborne (MC) USN
LT Garland S. Sinow (MC) USNR
CDR John W. Trenton (MC) USN
LT John L. Vigorita (MC) USNR
LCDR Philip D. Wiedel (MC) USNR (Inact.)

American Board of Urology

LT Charles E. Catlow (MC) USNR
CDR James R. Dillon, Jr. (MC) USN

American College of Surgeons

LCDR Robert C. Lehman (MC) USN (Fellowship)
CDR Elwood L. Woolsey (MC) USN (Fellowship)

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From the Note Book

1. CDR Ann Bernatitus (NC) USN, evacuated from each of the Philippine strongholds of World War II, Bataan and Corregidor, was featured on the 11 May 1954 telecast of the Auto-Lite program "Suspense". This was a salute to the Navy Nurse Corps on its forty-sixth anniversary (13 May 1954), to the women in the Armed Forces, and to the Armed Forces on Armed Forces Day (15 May 1954). (TIO, BuMed)

2. CAPT Wilma L. Jackson (NC) USN, who became a prisoner of war when Guam fell to the Japanese in 1941 and who later directed Nurse Corps activities after the recapture of Guam, was sworn in as the fourth Director of the Navy Nurse Corps with the rank of captain on 4 May 1954. (PIO, DOD)

3. On 4 May 1954, the Government of Panama awarded CDR Kenneth L. Longeway (DC) USN, the Medal of the National Decoration in the degree of Caballero. The award was made for the important and unselfish services rendered by CDR Longeway during his recent 2-year tour of duty in Panama which was completed in 1953. (TIO, BuMed)

4. Five dental officers from the Dental Department, Naval Training Center, San Diego, Calif., appeared on the program of the Annual Meeting of the Southern California State Dental Association which was held in Los Angeles. CDR John L. Biedermann discussed "Unusual Cases Treated During Advanced Prosthodontic Training"; LCDR Edwin B. Nutting, "Unusual Problems in Endodontic Practice"; LCDR Ralph H. S. Scott, "Unusual Cases Treated During Advanced Prosthodontic Training"; LT Louis H. Cordonier demonstrated "Newer Methods of Artificial Respiration"; and LT Jay D. Shaw discussed "Endodontic Problems". (TIO, BuMed)

5. Five Bureau of Medicine and Surgery scientific exhibits were shown at professional meetings during the week of 3-7 May 1954. These were: "U. S. Navy Dental Corps Casualty Treatment Training Program" which was shown at a meeting of the Southern California State Dental Society; "Treponema Pallidum Immobilization Test", "Post-Traumatic Subcutaneous Granulomas

Associated With a Crystalline Substance", and "Congenital Diseases of the Skin (Genodermatosis)" displayed at the Armed Forces Medico-Military Symposium held at Fitzsimons Army Hospital, 3-5 May; and "Telemetering Physiological Data" exhibited at a meeting of the Armed Forces Communications Association in Washington, D. C., 5-7 May 1954. (TIO, BuMed)

6. Average length of life in the United States has reached a record high of 68-1/2 years, a gain of nearly 4 years in the past decade. Women on the average live longer, outliving men by 6 years. The average lifetime expected for women at birth is 71.8 years, while the average for men is 65.9 years. This difference in the life expectancies of men and women has increased sharply since 1900, when females outlived males by an average of only 2 years. (P. H. S., H. E. W.)

7. A Leukemia Studies Section has been established in the Laboratory of Biology at the National Cancer Institute, National Institutes of Health. The Section will be responsible for formulating and executing the program of the National Cancer Institute in experimental leukemia. This work will include investigations directed toward improving the treatment of clinical leukemia and elucidating the etiology and pathogenesis of leukemia in experimental animals. (P. H. S., H. E. W.)

8. A new film, "Hazards of Dental Radiography", 16 mm., sound, color, 13 minutes, has been produced by the National Bureau of Standards and the Council on Dental Research of the American Dental Association. The film is available on loan or sale to groups having a specific interest in dentistry or radiography. The film illustrates the elementary physics concerned with dental radiography and, by showing actual radiographic procedures in the dental office, points out the radiation hazards involved in the use of X-radiation by the dentist. (N. B. S.)

9. Red cells stored at -20° C. in a solution of trisodium citrate (3%) and glycerol (30%) undergo only slow hemolysis, but rapidly lose their ability to survive after transfusion. In modified citrate-glycerol solutions survival is maintained, almost unimpaired, for about 3 months, thereafter viability diminishes with time; after 30 weeks' storage only about 50% of the red cells survive after transfusion. Red cells stored for a year at -20° C. in unbuffered citrate-glycerol mixtures react specifically with blood grouping sera although their reactions may be weaker than those of fresh cells. (Lancet, Apr. 24, 1954, H. Chaplin, H. Crawford, M. Cutbush, and P. L. Mollison)

10. Sixty-eight consecutive cases of fractured patella with displacement treated surgically are reviewed in Surgery, Gynecology and Obstetrics for May 1954 by R. S. Reich, M. D. and N. J. Rosenberg, M. D.

11. Experiences with a group of electrical injuries demonstrating the peculiarities of electrical trauma are reviewed in the Archives of Surgery for April 1954 by C. W. McLaughlin, Jr., M. D. and J. D. Coe, M. D.

12. Arterial oxygen and carbon dioxide tension during the postoperative period in cases of pulmonary resections and thoracoplasties is discussed in the Journal of Thoracic Surgery for May 1954 by V. O. Bjork, M. D. and H. J. Hilty, M. D., of Stockholm, Sweden.

13. Peyronie's disease is a fairly uncommon urologic problem which does not shorten life, is not a serious disease but is of extreme importance to the person concerned. Beneficial results from the use of cortisone in the treatment of this disease is reported in the Journal of Urology for May 1954 by G. H. Teasley, M. D.

14. The typical Meigs' syndrome must be: (1) a fibromalike tumor of the ovary, (2) with fluid in the abdomen, (3) with fluid in the chest, and (4) removal of the tumor must cure the patient. (Am. J. Obst. & Gynec., May 1954, J. V. Meigs, M. D.)

15. The National Bureau of Standards has recently constructed an experimental optico-electronic system that will facilitate the study of visual perception and recognition of patterns and promises to have a number of useful engineering applications. The device can clarify blurred images or produce outline pictures or line drawings from half-tone photographs. (Technical News Bulletin, N. B. S.)

16. The requirements of modern balanced anesthesia are: (1) adequate oxygenation, (2) hypnosis, (3) analgesia; (4) muscular relaxation, (5) control of undesirable reflex activity, (6) removal of waste products particularly heat and carbon dioxide, and (7) maintenance of circulatory efficiency, electrolyte balance, and acid base equilibrium. (Anesthesiology, May 1954, D. M. Little, Jr., M. D. and C. R. Stephen, M. D.)

17. A total of 146 cases of poliomyelitis was reported in the United States for the week ending 8 May as compared with 109 for the corresponding week of 1953. Almost two-thirds of the number reported this week were in 4 States as follows: California, 38 cases; Texas, 31; Florida, 15; and Mississippi, 8. The incidence of infectious hepatitis has been continuously decreasing during the past 6 weeks--from 1,591 cases reported for the week ended 27 Mar to 1,106 for the current week. The cumulative total for the first 18 weeks of this year is 23,167 cases as compared with 12,171 for the corresponding period of last year. (P. H. S., H. E. W.)

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Recent Research Reports

Naval Medical Research Institute, NNMC, Bethesda, Md.

1. Results of a Rectal Swab Culture Survey Among Naval Personnel Without Previous Sea Duty. Memo Report 53-22 related to NM 005 048.04, 27 Nov 1953.
2. Studies on the Use of Simulants for the Investigation of Methods of Spread of Enteric Organisms. NM 005 048.04.16, 3 Dec 1953.
3. Reproducibility of the Lethal Effect of Total-Body Irradiation in Mice. Lecture and Review Series No. 53-9, 23 Nov 1953.
4. Merozoite Size in Exoerythrocytic Infections of Plasmodium gallinaceum, P. fallax, P. lophurae, and P. cathemerium. NM 005 048.01.07, 16 Dec 1953.
5. The Effect of a Chelating Agent on Myosin Atpase. NM 000 018.04.12, 6 Jan 1954.
6. Effect of Cell-Free Aqueous Extracts From Normal and Irradiated Spleens on X-ray Induced Mortality in Mice. NM 006 012.04.63, 10 Feb 1954.
7. A Preparation of Cysteine Hydrochloride Using Radioactive Sulfur^{35}. NM 006 012.05.13, 15 Feb 1954.
8. Morphologic Effects of Irradiation of the Salivary Glands of Rats. NM 006 012.04.66, 1 Feb 1954.
9. Transplantation of Preserved Nonviable Tissues. Lecture and Review Series No. 53-5, 18 May 1953.
10. Project Fast, A Field Study of Combat Stress. Lecture and Review Series No. 53-4, 22 Apr 1953.

Naval Medical Research Unit No. 3, Cairo, Egypt

1. Lecithochirium lycodontis N. Sp., Trematode From the Moray Eel of the New Hebrides. NM 005 050.50.01, 1953.
2. A Study of Water Temperatures in a Representative Egyptian Canal in Connection With Schistosomiasis Control. NM 005 050.38.03, 1953.
3. The Relapsing Fevers: A Survey of the Tick-borne Spirochetes of Egypt. NM 005 050.29.14, 1954.
4. The Diagnosis and Management of Hepatic Abscess of Amebic Origin. NM 007 082.11.05, 1954.
5. Clinical Observations in Shigellosis. NM 005 083.07.03, 1954.
6. Susceptibility Studies in Schistosomiasis. II. Susceptibility of Wild Mammals by Schistosoma mansoni in Egypt, With Emphasis on Rodents. NM 005 050.25.02, 1954.

Naval Medical Research Unit No. 4, NTC, Great Lakes, Ill.

1. Controlled Studies on the Comparative Efficacy of Erythromycin and Penicillin in the Treatment of Scarlet Fever. NM 005 051.19.01, 1 Mar 1954.

NAMRU #4 (continued)

2. Treatment of Acute Respiratory Infections With Erythromycin, NM 005 051.17: Controlled Studies on the Efficacy of Erythromycin in Miscellaneous Acute Respiratory Infections, NM 005 051.01: Effect of Duration of Therapy of Streptococcal Infections on Eradication of Streptococci and on Formation of Anti-Streptolysin O, NM 005 051.02, 25 Mar 1954.
3. Attempts to Produce Rheumatic Fever in Rabbits by Means of Prolonged and Intensive Streptococcus Infection. NM 005 051.03.07, 15 Apr 1954.

Naval Medical Field Research Laboratory, Camp Lejeune, N.C.

1. Addendum to Tribolium castaneum (Herbst) as a Source of an Antibacterial Agent. NM 005 025.20.02, Apr 1954.
2. Preliminary Studies on the Mechanism of Biological Action of Ultraviolet Irradiation and Metabolic Recovery Phenomena. NM 005 052.27.05, Mar 1954.
3. Studies on the Effect of Decompression on Certain Insects With Special Reference to Anopheles quadrimaculatus Say and Aedes sollicitans Walker. NM 005 052.24.01, Apr 1954.
4. The Effect of Submerged Pine Needles on the Oviposition and Development of Anopheles quadrimaculatis Say. NM 005 052.02.07, Apr 1954.
5. High Altitude Observation Chamber for Insect Physiology Studies. NM 005 052.24.02, Apr 1954.

Medical Research Laboratory, Submarine Base, New London, Conn.

1. Report on Pre-production Samples of Flying Goggles--Type II. Memo Report 53-2, 10 Feb 1953.
2. Q-Methodology in Criterion Research. NM 003 041.53.01, 28 Oct 1953.
3. The Roles of Sensation Level and of Sound Pressure in Producing Reversible Auditory Fatigue. NM 003 041.56.02, 19 Apr 1954.
4. Negative Film on Pressure-sensitive Lacquer for Projection Teletypes. Memo Report No. 54-5, NM 002 014.08.03, 20 Apr 1954.

U.S. Naval School of Aviation Medicine, NAS, Pensacola, Fla.

1. Effects of Carcholin on Dark Adaptation and Visual Purple Regeneration. NM 001 059.30.02, 10 Dec 1953.
2. An Application of Side-tone in Subjective Tests of Microphones and Headsets. NM 001 064.01.20, 1 Feb 1954.
3. Time to Complete Naval Air Training As An Additional Criterion of Success. NM 001 077.01.04, 4 Jan 1954.

Dental Research Facility, Dental Department, Great Lakes, Ill.

1. The Effect of Topical Fluoride on the Dental Caries Experience in Adult Females of a Military Population. NM 008 013.05.07, 10 Dec 1953.
2. Caries Incidence, Symmetry and Gingival Experience in Two Hundred Forty-Three Females of a Military Population. NM 008 013.05.08, Feb. 1954.

U.S. Naval Air Development Center, Johnsville, Pa.

1. Data Sensing and Recording Techniques Established for the Human Centrifuge. NM 001 060.07.02, 29 Jan 1954.
2. Theoretical and Experimental Study of Freezing Rates of Animals and Physical Models. NM 001 060.05.03, 4 Mar 1954.
3. Study of the Effect of Acceleration Stress on Fluid and Electrolyte Distribution in Mammalian Systems. NM 001 060.05.02, 9 Feb 1954.

Naval Air Material Center, U.S. Naval Base, Philadelphia, Pa.

1. Aeronautical Medical Equipment Laboratory; Report on: Afterburner Noise Measurements in Ground Engine Run-ups. NM 001 062.05.02, 23 Feb 1954.

U.S. Naval Radiological Defense Laboratory, San Francisco, Calif.

1. Alterations in Organ and Body Growth of Rats Following Daily Exhaustive Exercise, X-irradiation and Post-irradiation Exercise. NM 006 015, USNRDL-427, 23 Dec 1953.

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BUMED INSTRUCTION 6010.6 20 Apr 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical Corps Personnel Regularly Assigned

Subj: General responsibilities of medical officers with regard to physical disability retirement procedures

Ref: (a) Section IV, Chapter 18, ManMedDept

Encl: (1) SecNav ltr JAG:III:7:WBM:cw of 28 January 1954

This instruction provides wider distribution to the enclosure and brings to the attention of addressees the effect of the instructions therein on the performance of medical officer duties generally with a view toward providing further guidance in those areas under the technical and management control of this Bureau.

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BUMED INSTRUCTION 1770.4A 26 Apr 1954

From: Chief, Bureau of Medicine and Surgery

To: Activities in Continental United States Having Annual Navy Contracts for Care of the Dead; All Commandants of Naval Districts and River Commands, Continental United States; and Commandant, Tenth Naval District

Subj: NavMed 1347, Request for Reimbursement or Payment of Burial Expenses; use of

Ref: (a) NavMed 61 (Rev. 11-51), Information for Next of Kin

This instruction establishes a procedure for submission of subject form, in lieu of itemized bills, to request reimbursement or payment of burial expenses incurred for deceased Navy personnel. BuMed Inst. 1770.4 is cancelled.

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BUMED NOTICE 6310 28 Apr 1954

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals, Continental Limits United States

Subj: Work Injuries in Hospitals, 1953; reports of

Ref: (a) Ltr from the Secretary of Labor dtd 4 Mar 1954 to the Secretary of the Navy

Encl: (1) 2 copies of Instructions for preparing B. L. S. Form 2398
(2) 2 copies of Supplementary Instructions for preparing Part II of B. L. S. Form 2398
(3) 6 copies of B. L. S. Form 2398

By reference (a), the Secretary of Labor has requested the Navy Department to participate in a Bureau of Labor Statistics study of work injuries among hospital personnel.

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BUMED NOTICE 6700 4 May 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: BuMed Inst 6700.2 CH 1 (Property exchange and accountability in evacuation of patients)

Encl: (1) Subject change

This notice provides a replacement page 3 for enclosure (1) of BuMed Inst. 6700.2. The enclosed page-picks up a subparagraph 6c which through a printer's makeup error was omitted from the 27 Apr 1953 printing.

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BUMED INSTRUCTION 1000.1 5 May 1954

From: Chief, Bureau of Medicine and Surgery
To: Commanding Officers, U.S. Naval Hospitals

Subj: Responsibility for conducting investigations in certain cases

Ref: (a) Section 0204c NS MCM 1951

This instruction invites attention to the provisions of reference (a) with respect to the responsibility of addressees in cases involving naval personnel who incur disability under unusual circumstances and to insure that appropriate action is taken when indicated.

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